

Upper Mississippi River National Wildlife Refuge Complex
Comprehensive Conservation Plan

Issue Fact Sheet

The Issue: Island and bank erosion

Background: Islands play a crucial role in providing a diversity of fish and wildlife habitat on the Upper Mississippi River (UMR) floodplain. Forest, shrub, grassland, and mud flat habitats occur on islands, while aquatic areas of emergent and submergent vegetation, and open water habitats are found adjacent to the islands. Islands protect aquatic vegetation beds from the erosive action of wind and waves. Islands divert water flows that cut channels and deposit sediments downstream of the islands, thus providing a diversity of water depths for fish and aquatic plant habitat. Stream banks provide edge habitat for fish and wildlife and protect upland habitat from erosion.

When the navigation system was constructed in the 1930's, the lower one half of most of the newly inundated pools became a mosaic of open water and emergent and submergent vegetation, interspersed with many islands. Over time, most of these islands have been lost to erosional forces of water current, wind and wave action, and boat wakes. Much of the remaining habitat now consists of wind-swept riverine lakes often void of aquatic vegetation, particularly emergent plant beds of arrowhead, river bulrush, cattail and giant reed grass. Bank erosion has increased sedimentation rates within the system and resulted in the loss of upland habitat.

An important component of habitat restoration of the UMR includes the protection and reconstruction of islands and stream banks. The primary funding for these activities is through the Environmental Management Program of the US Army Corps of Engineers. Islands complement other project features including, water level management, backwater dredging for fish habitat, bank stabilization, establishment of upland nesting cover, and dike construction. Other avenues for island and stream bank work include Corps of Engineers funding for Operation and Maintenance of the navigation system and cost sharing with non-federal organizations.

Main Concerns:

1. Loss of riverine islands and shorelines has resulted in significant loss of floodplain habitat on the UMR.
2. Some believe that islands should be built in areas where they once existed, and in a manner that duplicates natural islands. However, actual habitat needs often call for islands that may look somewhat unnatural and be in strategic versus original locations.
3. The Fish and Wildlife Service does not receive funding specifically for maintenance of constructed islands or their restoration after flooding. Thus, some islands do not provide the full extent of habitat benefits as originally planned or intended.